

# Successful Solar Tags Aggregation

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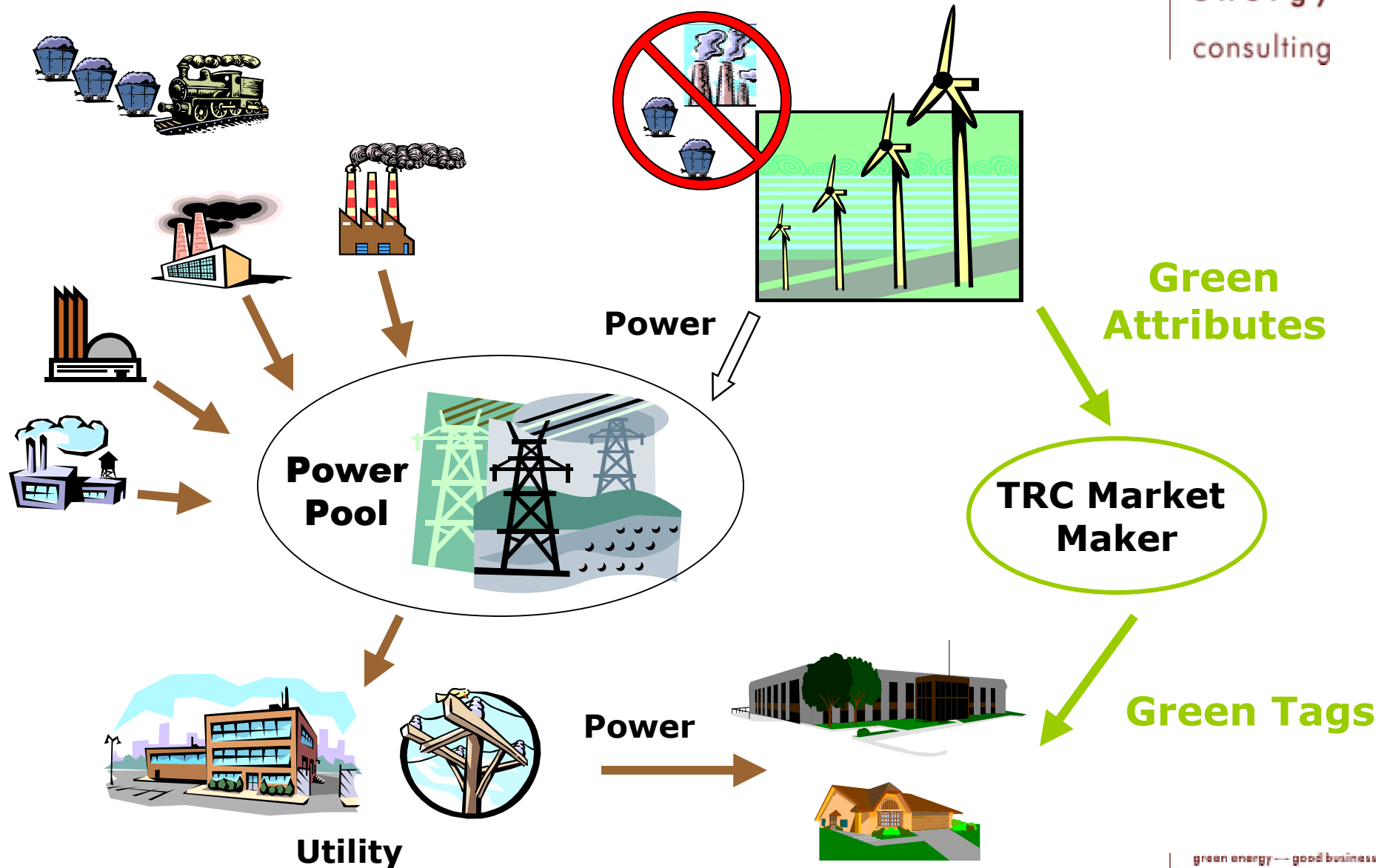
Cascade Solar Consulting  
Bonneville Environmental Foundation  
Shuksan Energy Consulting

# Outline

- Classic TRC Transaction
- TRCs another way: Aggregation
- Opportunity, Challenge, Benefits
- Solar Starters Program Details
- Lessons learned
- Conclusions

# TRC Transactions

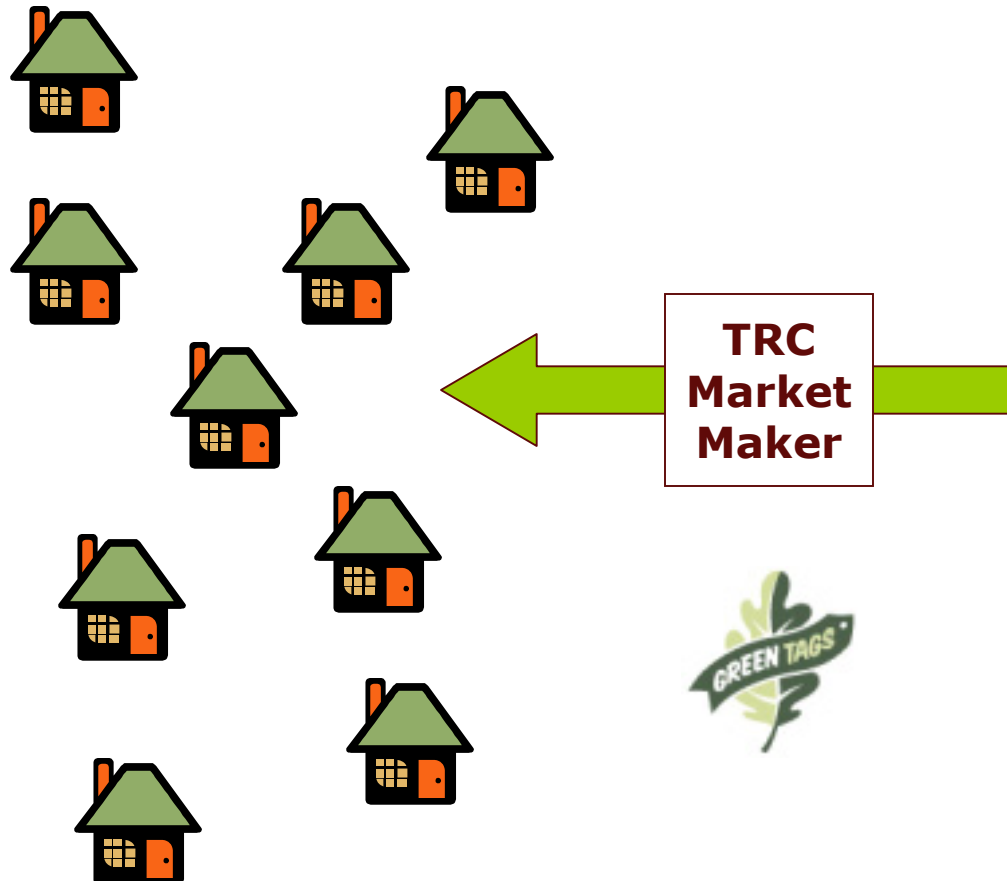
shuksan  
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consulting



green energy — good business

# TRCs - a bridging tool

## Small Scale Consumers



## Large Scale Generators

# Small-Scale PV Systems



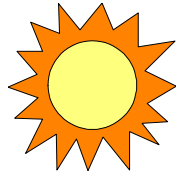
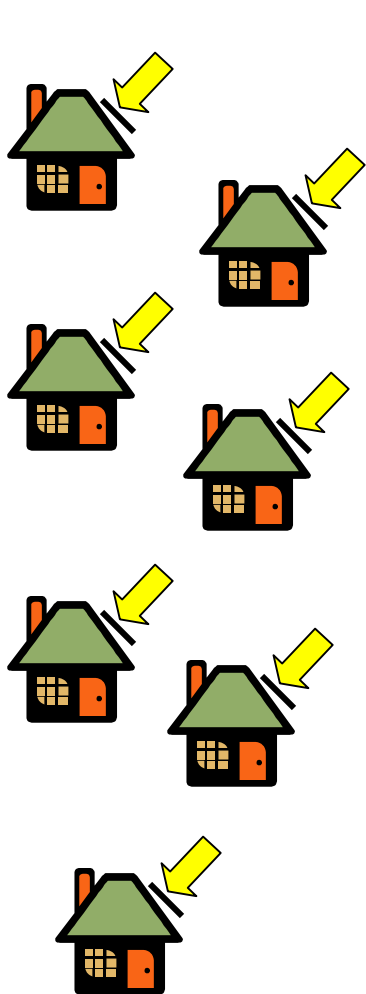
# The Opportunity

- Solar PV systems have significant benefits as a distributed generation technology
- TRC transactions not easy
  - Generation too small to be marketable
  - Transactional complexity
  - Mismatch of scale between sellers and buyers

# The Challenge

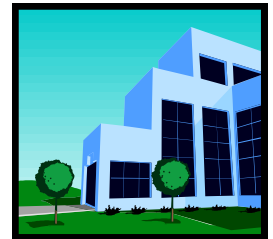
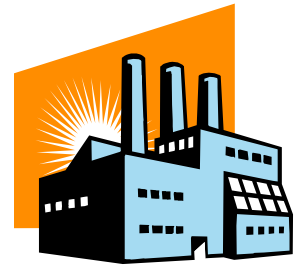
- Connect willing buyers of high grade TRCs with small, local producers
- Find ways to encourage deployment of more small scale PV systems by using market forces rather than public policy.

# Tags can solve the Challenge



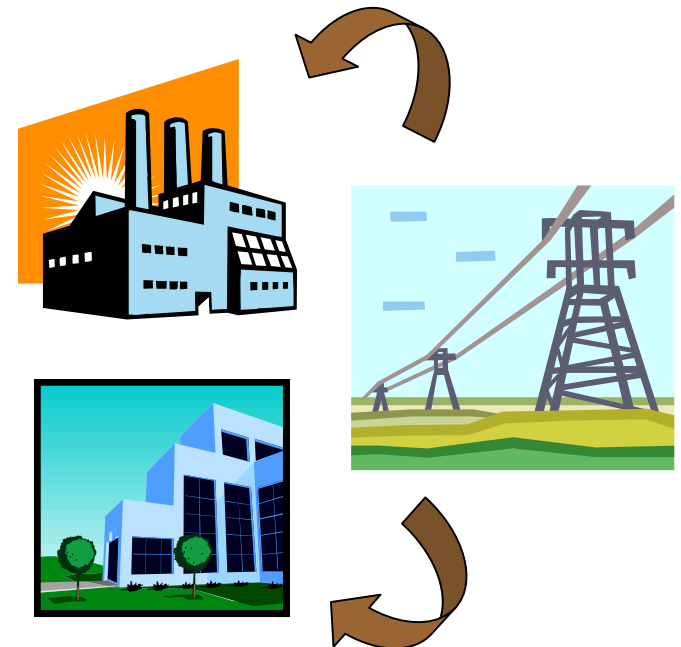
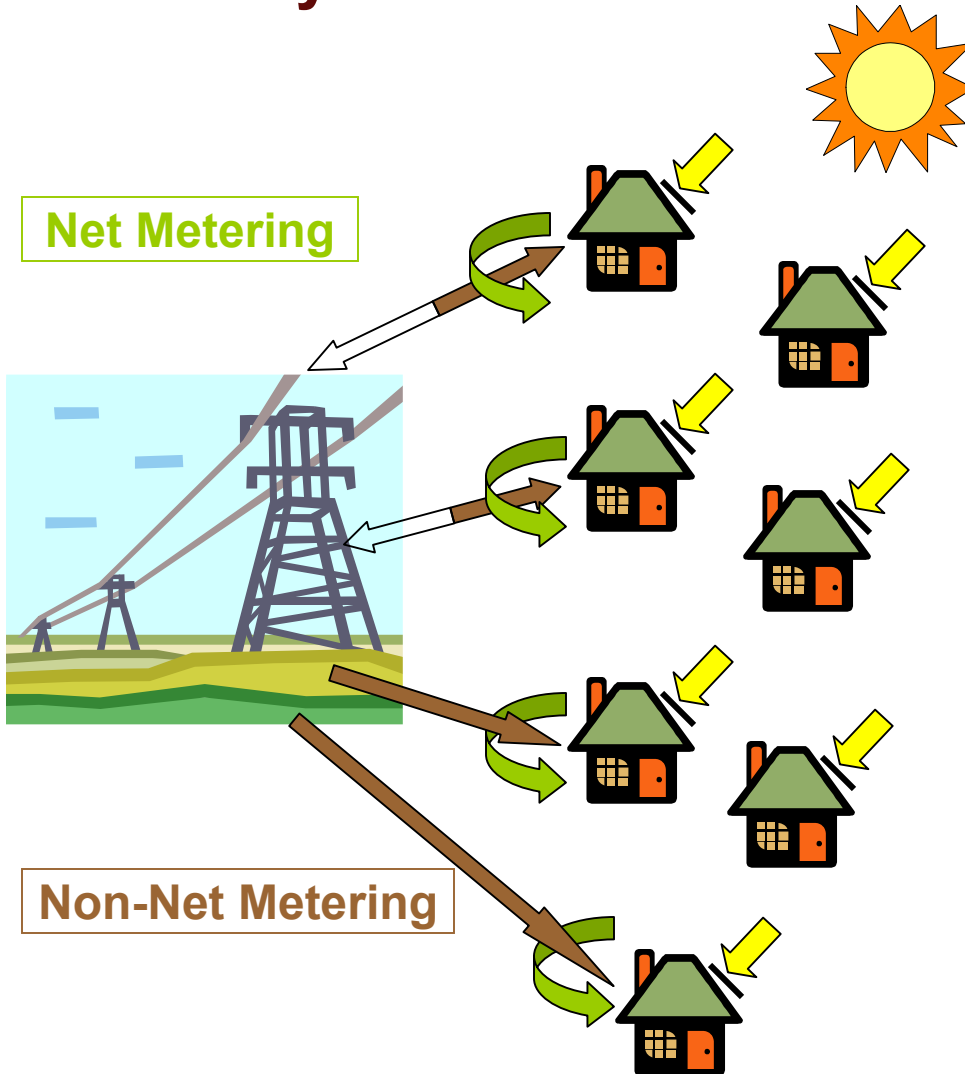
**Small Scale  
Solar Generators**

**Large Scale Consumers**

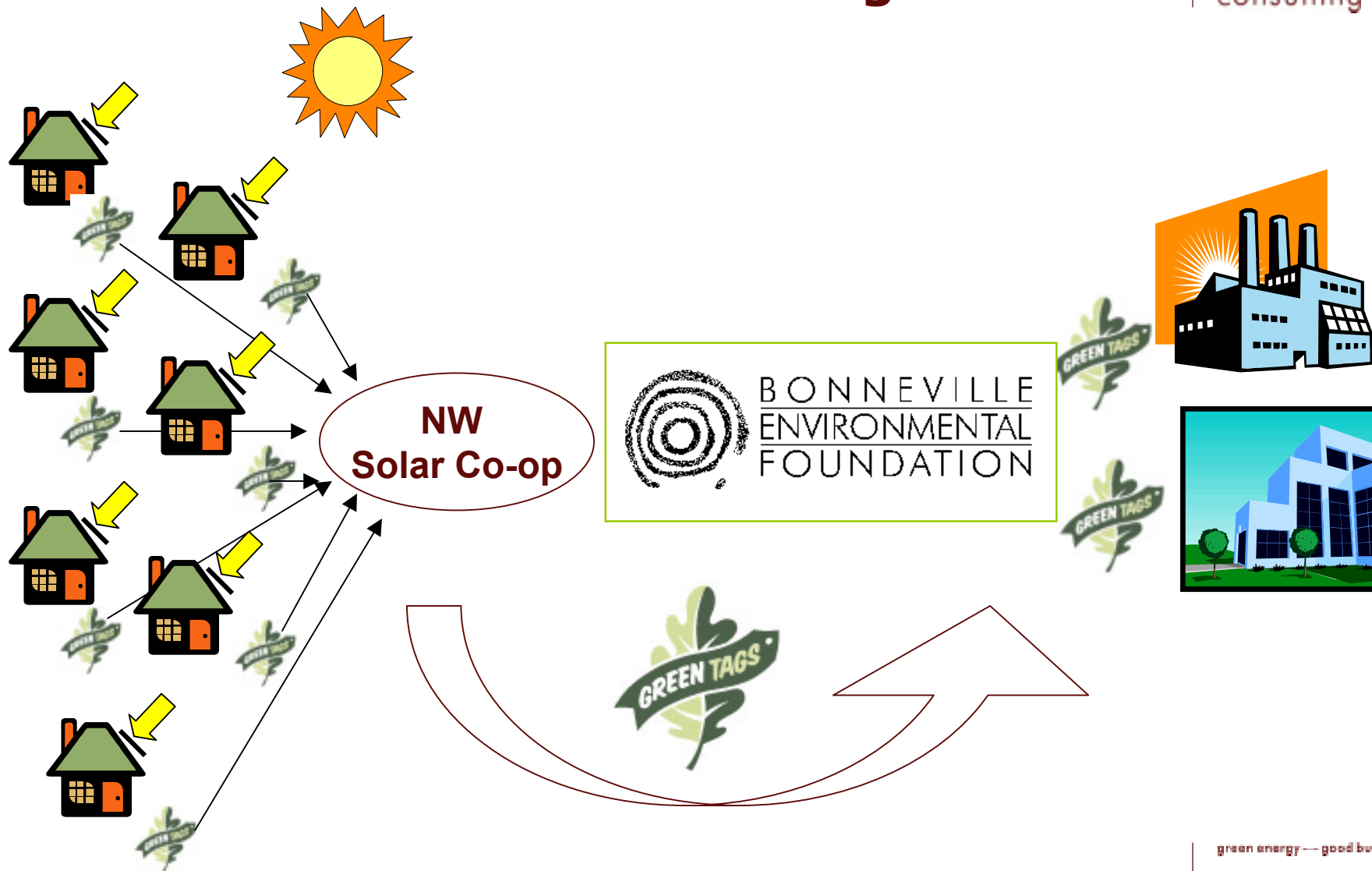




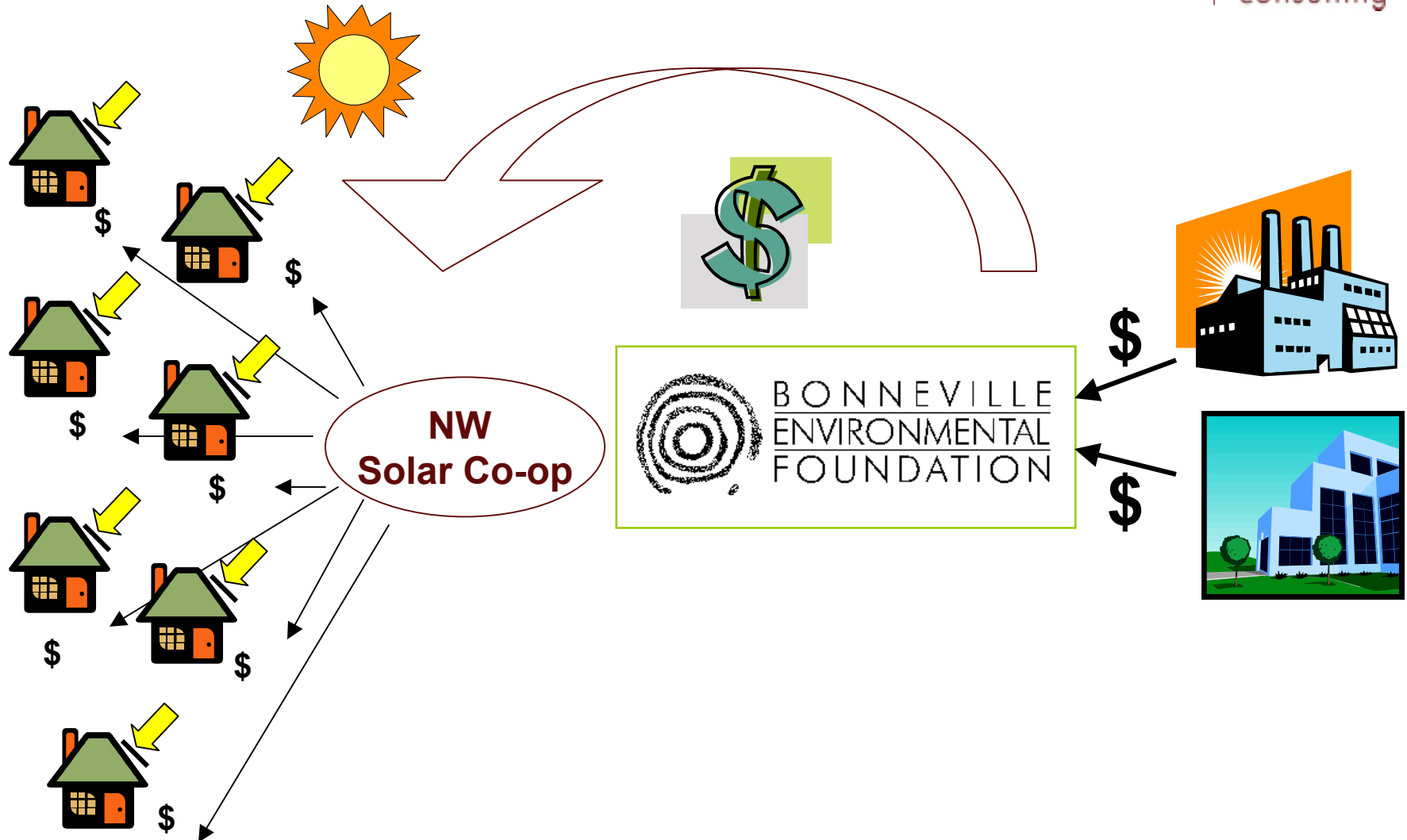
# Electricity Transactions



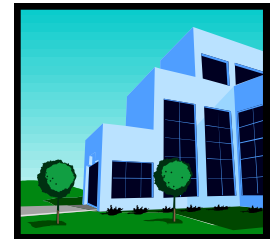
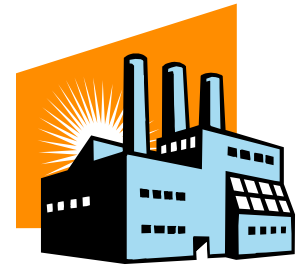
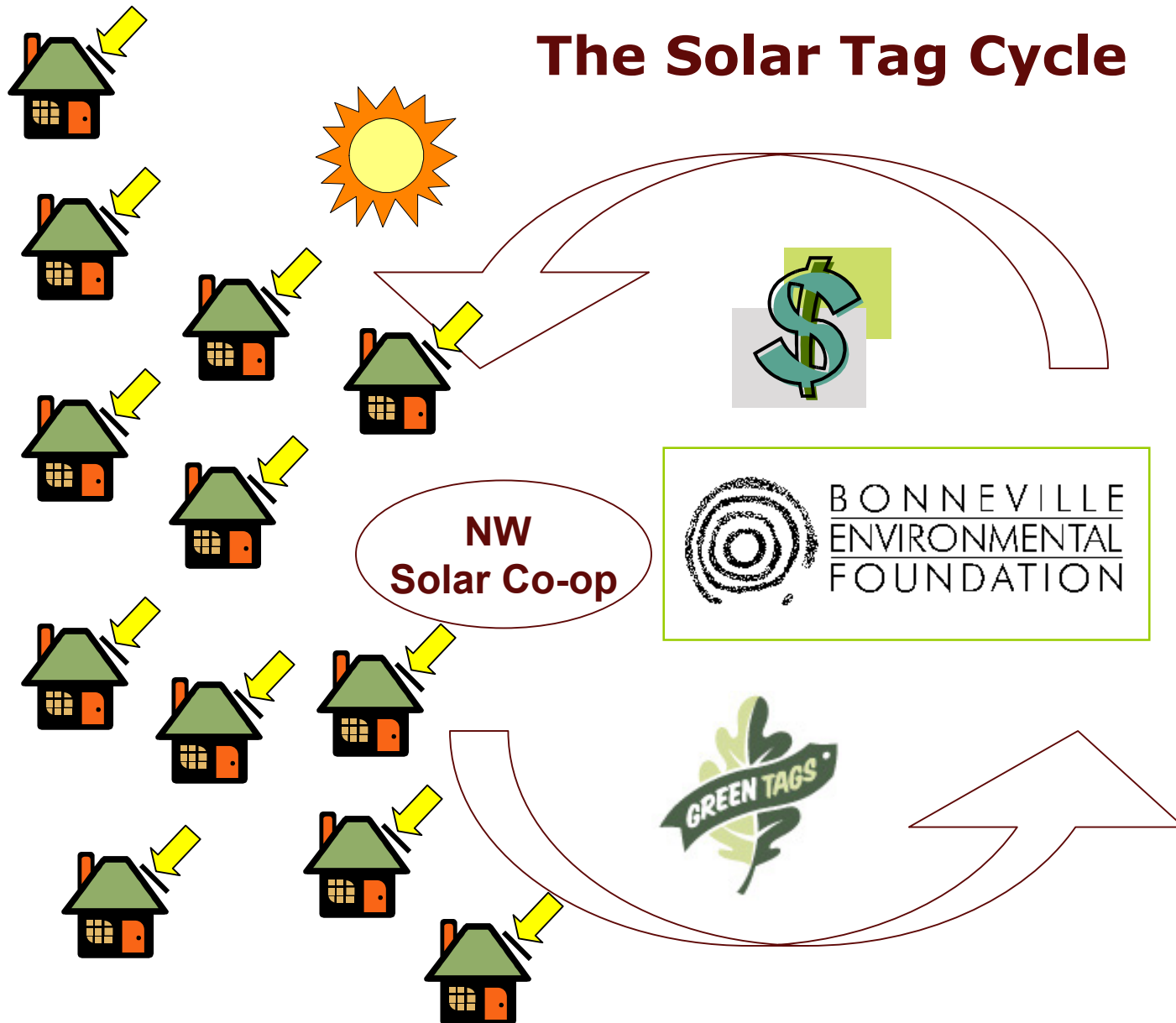
# The Solar Tag Flow



# The Dollar Flow



# The Solar Tag Cycle



# Benefits

- Customers: Beyond buying Green Power
  - Availability of high quality solar tags
  - Additional value of supporting small DG producers
- Producers: Beyond owning a PV system
  - Viable market for tags: new income stream
- The Rest of Us
  - Increased demand for Solar systems: driving down costs, increasing production
  - Distributed Generation advantages for the grid
  - Benefits of Green Power: Reduced Pollution

## Northwest Solar Starters: Key Players

- Lead customers
  - RWE Schott Solar, Xantrex Technology
- Green Tags Marketer
  - Bonneville Environmental Foundation
- Aggregation Facilitator
  - Northwest Solar Cooperative
- Producers
  - Nearly 30 residential and small businesses in OR and WA and growing

## Solar Starters Details

- Started in late 2001
- Currently 75KW of Solar capacity under management
- Program pays producers 10 cents/KW hr paid annually
- Producer signs a multi-year production contract guaranteeing payment
- Contract requirements for metered solar production, monthly reporting and auditing
- Co-op manages all aspects of producer relationship and transactions

## Lessons Learned: Tags Customers

- Solar Tags have more value
  - Audience feedback/support for solar very high
- Aggregated Tags have value
  - Audience Appeal for:
    - Supporting the “little guy”
    - Local/Regional Connection
- Challenges for communicating a TRC purchase “what’s a green tag?”
  - Same for all tags buyers, more so for differentiated tags



## Lessons Learned: Marketers

- Aggregated tags have a good sales story (extra value), but:
  - hard to quantify premium
  - Need a discerning client - differentiated products
  - Blending needed to capture value and stay affordable (top customers chose 5% solar)
- Required thoughtful oversight of the aggregation facilitator with reasonable checks & balances
- Challenge to balance target customers vs. adding to std mix

## Lessons Learned: Facilitator

- More transactions per supplier than expected in the start-up phase
  - Recruitment
  - Initiation
  - Audit/oversight
- Metering, Reporting, Auditing need good technical solutions
- Challenges satisfying Certification needs

## Lessons Learned: Producers

- Distinction between hosting a system and claiming to be “green powered”
- Learning curve of actual system production vs. design aspirations (or expectations)
- Pressure on system design & installation contractors and component manufacturers: Getting paid for production means long term performance counts.

# Conclusions

- There is a market for aggregated solar green tags and currently such tags sell at a premium
- The aggregator has a hard job
  - Co-op concept worked well because it is difficult for a 3<sup>rd</sup> party to achieve adequate returns
- Producer price of 10 cents is helpful to PV sales but not singularly compelling

# Credits/Contacts

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